

Remarks

The non-final Office Action dated December 24, 2008 lists the following rejections: claims 1 and 4-14 stand rejected under 35 U.S.C. § 103(a) over AAPA in view of Hirler (U.S. Patent No. 6,498,382); and claims 3-4 stand rejected under 35 U.S.C. § 103(a) over AAPA in view of the '382 reference as applied to claims 1 and 4-14 above and further in view of Tihanyi (U.S. Patent No. 5,973,360). In the discussion set forth below, Applicant does not acquiesce to any rejection or averment in this Office Action unless Applicant expressly indicates otherwise.

Applicant respectfully traverses each of the rejections under 35 U.S.C. § 103(a), as they overlook important differences and rely upon an improper combination with elements of the '382 reference. Applicant submits that the teachings of the '382 reference have important differences from those taught and claimed by Applicant's specification. As these differences may not have been considered as part of the obviousness analysis, Applicant first presents a brief technical discussion for the purpose of facilitating prosecution, noting that the claimed invention must be considered as a whole rather than as individual elements. *See, e.g.*, M.P.E.P. § 2141.02. Applicant's specification teaches that the trenches are strategically placed to direct the current flow lines. In particular, the trenches are placed such that the end part of the channel is located between the trench and the body portion. In this manner, the current from the source travels through the channel region and is then directed consistent with Applicant's FIG. 4. The '382 reference does not teach trenches arranged or configured according to these teachings. As apparent from FIG. 2 of the '382 reference, the trenches are positioned external to the functional device. Put another way, the source (element 4) is located between the trenches and the channel, which forms in the body region (element 3). Thus, Applicant's specification is the only teaching of record suggesting creating a device as claimed. Thus, there correspondence has not been shown for each element.

Moreover, upon viewing the teachings of the cited reference the skilled artisan would be lead to implement a device where the source (element 4) is located between the trenches and the channel for the reasons explained in the '382 reference. The asserted art, therefore, teaches away from a channel end portion that separates the trench from the body region. Such teaching away is strong evidence that the combination is non-obvious.

In *KSR*, the Supreme Court looked favorably on *Adam*'s treatment of teaching away stating, "when the prior art teaches away from combining certain known elements, discovery of a successful means of combining them is more likely to be non-obvious." The Court further tied in the relationship between the teach-away standard and demonstrating unpredictable results. "The fact that the elements [in *Adams*] worked together in an unexpected and fruitful manner supported the conclusion that Adam's design was not obvious to those skilled in the art." *KSR Int'l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 1742 (2007). Accordingly the rejections are improper and Applicant requests that they be withdrawn.

Consistent with the above discussion, Applicant submits that the proposed combination, using the teachings of the '382 reference, fails to correspond to claim limitations directed toward separating the conductive shield plate from body region by the channel end part of drain region. As explained in the Office Action, the '382 reference is alleged to be separated by item 7. The skilled artisan would readily understand the differences between item 7 and Applicant's claimed channel end part of the drain. In pertinent part, item 7 is not even taught to be physically near the channel of the '382 reference, which is formed under the gate and within element 3. Accordingly, modifications based upon the relevant teachings of the '382 reference would not correspond to the claim limitations.

Moreover, "(t)he key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. The Supreme Court in *KSR* noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit." M.P.E.P. § 2141. The reasons presented for the combination are aspects simply identified as "permittivity, reduction of on resistance and reduced length in drift path." Instant Office Action, page 4. No evidence in the record, however, is presented to explain why each of these reasons would be desirable in AAPA. Nor is it even clear that these aspects would be realized by the combination. Thus, the rejection is little more than a conclusory statement. For instance, the '382 patent explains that the permittivity can be lowered by replacing silicon dioxide with a gas-filled or evacuated cavity. Thus, the alleged advantages are due to replacement of silicon dioxide with a gas-filled or evacuated cavity. As there is no silicon dioxide area in need of such replacement

in AAPA, logic dictates that the skilled artisan would not use these teachings of the '382 patent.

Notwithstanding the aforementioned arguments, Applicant submits that the Office Action has misapplied the relevant law regarding the criticality of ranges (*i.e.*, the holding in *In re Aller*, 105 USPQ 233, 1955). As correctly quoted by the Office Action, but incorrectly applied, *In re Aller* dealt with a case in which the prior art was, for all intents and purposes, the same as the alleged invention. Thus, *In re Aller* is applicable where the prior art is otherwise identical to the claimed invention. Moreover, the case law and M.P.E.P. explain that there should be some logical reason for the skilled artisan to experiment with the relevant ranges, such as optimization for a known purpose. Only after these factors are present does the burden shift to an Applicant to show the criticality of a range. As discussed above, the combination with the '382 reference has significant structural differences, and moreover, does not suggest the benefits taught by Applicant's specification including those realized by the specific ranges in question. Thus, the Office Action has not presented any basis for alleging that the skilled artisan would find the same ranges desirable in the structure based upon a combination from the teachings of the '382 reference. Notwithstanding, Applicant directs the Examiner to FIGs. 4-10 and the corresponding discussion, which should help explain the import of the ranges in question relative to the current flow lines and other aspects of the device.

Applicant submits that the further modification in view of the '360 reference does not cure any of the deficiencies in the underlying rejection. Accordingly, Applicant traverses each rejection and requests that each rejection be withdrawn for at least the aforementioned reasons.

In view of the remarks above, Applicant believes that each of the rejections has been overcome and the application is in condition for allowance. Should there be any remaining issues that could be readily addressed over the telephone, the Examiner is asked to contact the agent overseeing the application file, Peter Zawilski, of NXP Corporation at (408) 474-9063 (or the undersigned).

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